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Passed March 1825.

Inaugural Essay

on

Intermittent Fever

by

Silas H. Beans

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Bucks County

Pennsylvania.

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Intermittent Fever is defined by Dr. Thomas to consist of a succession of paroxysms between each of which there is a distinct and perfect intermission from febrile symptoms or an apyrexial period.

Different names have been given to this fever according to the distance of time observed between the periods of its return.

When it comes on within the space of every twenty four hours and for the most part in the morning, Dr. Cullen says always in the morning, but this from observation is erroneous, it is called a quotidian. When it returns every other day or every forty eight hours for the most part at noon it is called a tertian. When similar paroxysms return every seventy two hours and mostly in the afternoon it is called a quartan. That under the tertian type is the most apt to prevail

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in the Spring and is the most frequent form of the disease. The quartan is the most obstinate and dangerous being chiefly prevalent in Autumn.

Of the quotidian, tertian and quartan intermittents there are several varieties and forms, to which may be added several others of less frequency. Hippocrates tells of quintans, that return at the end of ninety six hours. Van Switen mentions a case of a quartan turning to a quintan. Dr. Fordyce has seen two or three cases of septans. In all these the patients contrary to the generally received opinion were frequently attacked at night. These intermittents vary again in their shape. We see the anticipating coming on an hour or two sooner. The postponing an hour or two later. The anticipating intermittents show the disease to be more

violent than the postponing. The former if not soon checked will assume the remittent type. the latter yields very kindly to our remedies.

Some say that paroxysms do not come on at night but that they are prevented by sleep. This idea is erroneous as patients are sometimes awakened by the coming on of the rigors.

Quotidians, Tertians and Quartans vary in other respects having sometimes instead of one. two or three paroxysms on the same day. They are then called duplicated or triplicated. In the tertian and quartan there is still an intermission without fever. but in the quotidian this distinction is not to be seen. In the tertian it can most commonly be seen the best. When the paroxysms come on every day and the alternate paroxysms

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are similar or the one on the intermediate day is slight it is called a double tertian. When there are two paroxysms on the regular days and one slight on the intermediate day it is called a triple tertian. When there are two paroxysms on the regular days and none on the intermediate it is called a duplicated tertian.

Suppose in a quartan there is a severe paroxysm on the fixed days and a slight one on one of the intermediate days it is termed a double quartan and when there is a slight paroxysm on both intermediate days it is named duplicated quartan. The triplicated quartan with three paroxysms every fourth day and none on the intermediate days. Quotidians, Tertians and Quartans are also either true or spurious. True when the paroxysm is completed within twelve hours.—

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spasmous when retarded beyond that time. Intermittents are also divided into universal and partial. Universal when the whole system partakes—partial when a part is affected. Some make a number of distinctions founded on symptoms or the disease with which they are united as Hepatic—Colic—Emetic—Rheumatic and Exanthematic Intermittents.

Intermittents have a tendency to become remittents of which the quotidian is the most apt—the tertian next and the quartan the least. Quintans and the more retarded types never change to the remittent according to Van Swieten. It may likewise be remarked that the quotidian has the shortest cold but the longest hot fit and the whole paroxysm is the longest. The tertian has a longer cold but a shorter hot fit. and

the acute paroxysm shorter than that of the meridian. Hence the longest cold fit but the shortest hot one.

Meridian having the longest paroxysm produces most excitement and is consequently more apt to assume the continued remittent form. Dr. Gant of London says that he has known the cold stage to last eight hours but it most commonly lasts two or. In the quotidian the paroxysms follow each other in such quick succession and the excitement is so great that it requires remedy means on the part of the physician to arrest its progress — otherwise he will have a continued or remittent fever to manage either of which is much more perplexing to the practitioner and alarming to the patient. A tertian or a quartan fever becomes a meridian

before it runs into the continued: This is a regular guide and a quotidian before it assumes the continued type gradually loses its cold stage: but the hot stage increases, and hence we see more excitement and during the very venal period the system becomes very irritable. When these fevers arise in the spring of the year they are called vernal: and when in autumn they are known by the name of autumnal.

Intermittents often, more obstinate, and are of long duration so as to become very annoying to patients and often give rise to other chronic complaints—but more particularly enormous swellings and enlargements of the liver or spleen.

It seems to be very generally acknowledged that marsh miasmata or the effluvia arising from stagnant

water or marshy grounds when acted upon by heat is the most frequent cause of this fever.

It is asserted by Dr. Cullen to be very universally the cause of intermitting fevers in all their different forms. In admitting it to be a fact—we are led at the same time to conclude that marsh miasma must be confined to a considerable distance since it is found that persons residing constantly in the most healthy part of cities and far remote from marshes are sometimes attacked by them.

As respects the influence of the heavenly bodies on this disease. I shall leave for Dr. Tindal to explain.

A uneasy tired great fatigue long watching intemperance grief much air. debility exposure to cold lying in

them, rooms or beds among warm linen or warm meat or other damp or musty place the contagion of some long accustomed situation the reception of miasms have been ranked among the exciting causes of intermittents.

The peculiarity in this fever is its great susceptibility of renewal from very trifling causes, as from the prevalence of an easterly wind or from the retention of the original exciting cause. It likewise appears to have a necessary union in the body, which favours the recurrence of the complaint. In this circumstance intermittents differ from other fevers.

A certain knowledge of the proximate cause of intermittent fever has not yet been ascertained. But a derangement of the stomach and mucous

is that which is most generally ascribed.

Each paroxysm of an intermittent fever is divided into three different stages or fits. The cold stage commences with languor a sense of weakness and sluggishness in motion frequent yawning and stretching and an aversion to food. The face becomes ashy the features shrunk the skin of every external part is diminished and the skin over the whole body appears constricted as if cold had been applied to it. At length the patient feels very cold and universal rigors come on. The respiration is small frequent and anxious; the urine is almost colourless, sensibility is greatly impaired and the pulse is small frequent and often irregular.

These symptoms abating after a short time the second stage commences with

an increase of heat over the whole body
redness of the face, redness of the skin
thirst, pain in the head, back, loins or
kidneys and stomach, bleeding in the
bowels, anxiety and restlessness; the urine
is fuller and more free but still
scanty; the tongue furred and the pulse
has become regular hard and full. If
the attack has been very severe, then red
lines or albium will arise. When these
conditions have continued for some time,
a moisture breaks out on the forehead, ~~and~~
and by degrees becomes a sweat and this
at length extends over the whole body.
As this sweat continues to flow the heat
of the body abates, the thirst ceases, the urine
deposits a sediment, its excretion is free
and full, and most of the functions are
restored to their ordinary state; the patient
is however left in a weak and wearied

condition. This constitutes the third stage.

After a specific interval according to the species, a fresh paroxysm commences in the manner before described.

When the paroxysms are of short duration, together in their recurrence and leave the intervals quite free we may expect a speedy recovery; but when they are long, violent and attended with much anxiety and delirium the event may be doubtful. Other unfavourable symptoms are great prostration of strength, vertigo, fœtid excretions, the presence of dysentery, cholera morbus, enlargement of the liver and spleen inducing dropsy or jaundice and convulsions occurring during the paroxysm, succeeded by coma.

Dissections of those who have died of an intermittent show a morbid state of many of the viscera of the thorax and

abdomen. but the liver and organs concerned in formation of bile as likewise the spleen and mesentery, are those which are usually most affected.

Having finished the observations on the theoretical part of fever. I come now to consider the cure of intermittent.

In the treatment of intermittent fever a beaten path is before me. Fortunately, for the profession our remedies under a timely administration are almost invariably competent to effect a cure.

This naturally presents itself to us under two heads. First The treatment during the paroxysm. Secondly. The treatment during the interval or apyrexia. Following the indications pointed out by the disease, we sedulously imitate nature in our treatment and endeavour to excite

prostration when called to a patient in the cold stage of an intermittent. Many practitioners are very much attached to opium in the cold stage. This was originally introduced into practice by Dr. Trotter who gave it in the form of Laudanum. Thirty drops would generally arrest the progress of the paroxysm. The dose of Dr. Trotter is often sufficient but sometimes it is necessary to increase it to two or three times the quantity. The immediate effects are to quiet the nerves and to diffuse a gentle warmth and moisture over the whole body and to relieve the pain in the head back and extremeties. When the cold stage is very violent and menacing dangerous consequences an emetic is an excellent remedy and generally affords relief during its operation.

During the hot stage the indications are to remove the

medicines which may keep it up and to induce perspiration. The irritation which may arise from bile in the stomach is most generally indicative of vomiting which ought to be subdued by drawing the patient to drink plentifully of warm water and has calculated to induce vomiting in a slight degree such as the infusion of the Ipecacuanha Pepsinum &c. When this is not the case I cannot conceive it a safe practice, especially in sedentary habits as we do, they might be the consequence. In a majority of these cases great benefit will be derived from taking eight or ten ounces of blood from the arm, which seldom fails to allay the pain in the head and by alarming the extreme vessels a gentle perspiration is brought on — And it not

unfrequently happens, that by the loss of some blood, nothing is increased with safety.

I come now to the stage in which expectorants present themselves. The European writers entirely, James's Powders, but in this country the antimonial preparations are used especially the Sanguinaria Canadensis. Aristolochia Serpentaria makes an excellent antimonial in this stage of the fever. Many physicians especially those of warm climates entirely omit it in the hot stage. To Dr. Lind we are indebted for this practice. He gave it in the form of Sudorium combined with Aqua Menthae. Thirty or forty drops to ℥ij in Aqua Menthae. He observes that a solution of the nitrous takes place, that the system is increased for the

subsequent employment of the bark and also prevents congestion of the viscera with its consequences. That this practice will answer in ordinary cases I have no doubt, but sometimes the fever has more of an inflammatory type and demands other remedies. But this state can be determined by corresponding symptoms. There is a strong and full pulse with a flushed countenance laborious respiration local pain especially in the head and side. The Spiritus Mindereri with Laudanum answers a very good purpose in this stage. But the lancet is not to be spared and the application of a blister to the side ought not to be omitted. The alimentary canal should be freely opened. For this purpose the mercurial purges will be found to answer very well —

Mild diaphoretics are at the same time to be employed as the Spiritus Mindereri or the antimonials—

I have now mined as the second part of the treatment or that which is proper in the interval or apyrexia. This during the apyrexia or interval may be arranged under two heads.

That to be employed during the time of the intermission and that on the approach of the paroxysm — to meet the first indication which is arises from marsh miasma. the patient is to be removed to some elevated situation or to the sea shore which generally produces a very salutary effect agreeably to Dr. Hosack. But as the majority of the persons so affected are either so situated or so circumstanced that a removal would be unadvisable

we must therefore have recourse to medicine alone. To meet this indication I do not know that there is any medicine to be compared to the Peruvian bark and its extracts, the sulphate of quinine. The cinchona oblongifolia lancifolia and cordifolia seem to be the three species now in greatest repute and of these the red is to be preferred. It was formerly supposed that the fever should be allowed to progress for sometime before the bark was given, that the morbific matter might be expelled. This was the opinion of Boerhave, Van Swieten, and Sydenham. At the present time practioners are pretty generally agreed, that the earlier it is given the more speedily is the cure accomplished. Some have maintained that it is not necessary to attend to the

condition of the alimentary canal or prepare the system for the reception of the bark. This however is not the case nor is it the common opinion among practioners but as a general rule we should evacuate the stomach by vomiting and the intestines by purging. The bark may and very often does succeed itself without any previous evacuations, but in general it is hazardous to proceed on this plan. By evacuating the alimentary canal both by Emetics and Purges, all irritation and foul accumulations are removed and the system rendered originally more susceptible to the operation of other medicine. It is not always necessary to give a cathartic after taking an emetic as it very frequently opens the bowels in the course of a few hours. When this is not the case a purge

should be given and for the most part some saline cathartic answers very well. Emetics seems to be superseded in some measure by the use of purges. In this case I would prefer the old fashioned cathartic. Calomel and Jalap. Besides these evacuants venesection is always demanded in inflammatory cases and without it the bark is usually rejected, or the irritable state of the stomach or if retained aggravates the disease.

The bark ought never to be administered until the system is thus prepared for its reception and in this manner the Cinchona would soon regain its name— "Specific for the intermittent."

Sometimes intermittents are accompanied with visceral obstruction. In such cases the bark has been condemned by

Cullen. I think the question may be easily adjusted by the following rules.
When there is no inflammatory action I would not hesitate to use the bark: but when there is much pain in the side with an active pulse it is eminently mischievous. In this case we are divided to trust to blisters and a slight salivation and when there is much fever and pain venesection is often to be added to the salivation. This practice is highly recommended by professor Chapman. at one time it was much disputed whether the bark should be given immediately before a paroxysm. Dr. Cullen thought it should.
In this I think he was wrong for instead of preventing the paroxysm it increased the fever — some have gone still farther among

whom is Dr. Clark who administered during the whole of a paroxysm. This I have never seen tried but should judge it to be a dangerous practice. It is now a rule among the ablest practioners that whenever there is the slightest indication of a paroxysm to administer the bark. It is given in substance with Malt wine instead of liquorice which last completely conceals its taste. The dose is one or two drachms repeated as often as the stomach will bear it until an ounce is taken during the interval with the addition of some aromatic as the Serpentaria &c. In the West Indies they are in the habit of giving much larger doses, and it is said to have been successful when ineffectual in the usual manner. Some stomachs will not bear the bark in substance or the patients

will not take it. In doses this is may be given in infusion or decoction with some aromatic. The sesquichloride answers very well, by rendering the bark more efficacious and the taste more agreeable.

The sulphate of quinine has very recently become a popular remedy. Its undoubtedly is equal if not superior in point of efficacy, to the cinchona. The dose is about three grains every two hours until twelve or ten grains be taken which if administered during the interval, will be found generally to arrest the progress of the fever. Quinine is to be virtually the same as the cinchona, the same observation holds good as to the administration of the medicine. There are many other modes of using the bark by Oyster Bath and

the barkjacket each of which has in its turn proved beneficial though very much neglected in practice.

The wild Cherry, Black alder, Dogwood, and the Oak, all have at one time or another been highly extolled, and should not be lost sight of as they are the pro-duct of our own country and may be employed in cases of emergency.

The doses are pretty much the same as those of the Peruvian bark. The cupri sulphas or blue vitriol has been very highly recommended by Dr. Mono. The following formula is recom-mended by the medical Journal—

℞ sulp Cupri ℈ss Cinchona ʒij formed into XVI pills four of which are to be taken during the day and to be con-tinued for a week or two. The different preparation of iron are of great benefit

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The sulphate of alumine is highly esteemed by Dr. Cullen. Arsenic has been considered a famous remedy in many periodical diseases but more particularly in intermittent fever—

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